

Sea Tel 240 TV

3-Axis marine stabilized antenna system compatible with C-Band and Ku-Band satellites

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Product Sheet



The Sea Tel 240 TV is Cobham SATCOM's latest top-of-the-line, 2.4m (94") TV-at-Sea™ system. The reflector, radome design, and RF components are based on our well proven Sea Tel ST94 system, while the stabilization platform has been updated to integrate our IMA Platform. It is the preferred system for users who need the largest possible offshore operating area and compatibility with all known and planned satellites. The Sea Tel 240 TV has undergone major tracking, reliability, stability and industry leading improvements and is the antenna of choice for large vessels operating in deep oceans.

Proven technology, even simpler

The Sea Tel 240 TV has reliable and proven IMA electronics have a host of improvements for improved productivity. These include: LED indicators for troubleshooting, USB port for Bluetooth adaptor and digital control interface between the motor driver and

integrated ICU for improved tracking and system communications. The level cage used in the predecessor systems has also been replaced by high accuracy accelerometers. This allows for continuous calculation of position, orientation and velocity vector of a moving object without the need for external references.

The micro-electromechanical (MEM) sensors used in Sea Tel's antennas are based on the same technology currently being used in missile and aerospace technology around the world.

Designed to last

Much like its predecessor, the Sea Tel 240 is available in "Dual Band" (C-band and Ku-band) configuration that permits the same antenna to be used for both. The Sea Tel 240 is designed and built to pass the U.S. Navy's tests for vibration, shock and protection against RFI and EMI emissions. Sea Tel 240 3-Axis marine stabilized antenna system compatible with C-Band and Ku-Band satellites

Key Features

- Industry proven IMA electronics
- Integrated Brake Control PCB
- Integrated GPS processing
- Integrated Polarization control Aux Relay
- Reduced mean time to repair (MTTR)
- Ethernet, Serial (D-Sub & USB) ports provide ease of access to antenna either locally or remotely
- Ethernet over Coax communications
- Accommodates multiple satellite receivers
- Unmatched stabilization accuracy
- Television Integrated Control Unit (TICU) assembly
- HD ready

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SPECIFICATIONS

Antenna Gain C-band	39.5 dB at 4.2 GHz
Antenna Gain Ku-band	47.5 dB at 12.5 GHz
Minimum EIRP C-band	30-31 dBW
Minimum EIRP Ku-band	35-36 dBW
Dish Diameter	2.4 m; 94 in
Radome Dimensions	3.66m/144in D x 4.17m/164in H
Antenna Stabilization	3-axis servo
Built-In GPS	Automatic Satellite Acquisition
Ship's Motion	+/- 15° Roll or +/-20° Roll and +/- 15° Pitch
Full Elevation Range	-15° to +115°
Radome Baseframe	Galvanized steel
Azimuth Range	Unlimited
Ingress protection	IP56
Number of panels	18

SYSTEM SIZE (ADE)

Diameter	3.66m (144")
Height	3.6-3.8m (142")
Installed height	416-56cm (164") including base frame if mounted with standard legs, 3.76m (148") if flush-mounted
Hatch Size	45.72cm x 86.36cm (18" high x 34" wide)
Side Door	45.72cm x 91.44cm (18" wide x 36" high)

SYSTEM WEIGHT (ADE)

Install weight (typically)	1300 Lbs (590 kgs) (with 144" radome)
Shipment Weight (typically)	Reflector crate: 103" x 88" x 73" ~ 800 lbs (261x223x185 cm ~ 362 kg)
	Dome/base crate: 114" x 85" x 90" ~ 1700 lbs (290x215x102 cm ~ 771 kg)
	Pedestal crate: 35" x 66" x 79" ~ 600 lbs (89x168x201 ~ 272 kg)

RADOME ASSEMBLY

Type	Frequency Tuned
Material	Composite foam/laminate

POWER REQUIREMENTS (ADE)

Single phase	85-264 VAC, 47-63 Hz
Pedestal	450 W ((brake release, pedestal drive and BUC drive)

ADE ENVIRONMENTAL CONDITIONS

Temperature Range	(Operating) -25° to +55° Celsius (-13° to +131° F)
Humidity	100% Condensing
Wind Speed	56 m/sec (125 mph)
Solar Radiation	1,120 W per square meter, 55° Celsius
Icing	4.5 pounds per square foot. Degraded RF performance under icing conditions.
Rain	Up to 101.6mm (4 inches) per hour. Degraded RF performance may occur when the radome surface is wet

RECEPTION

Dual C-Band Linear/Quad Ku-Band linear (can be configured to receive 2 C-Band and 2 Ku-Band signals simultaneously or 4 Ku-Band signals simultaneously)

Ku-band: The entire frequency range for Ku-band satellite television is 10.7 to 12.75 GHz. Proper polarization is also an issue as both linear polarizations (horizontal & vertical).

C-band: The C-band frequency range is 3.7 to 4.2 GHz worldwide. Sea Tel TV-at-Sea™ systems are delivered with C-band LNB noise temperatures of 17 degrees K or better. The IF frequency in all cases is 950-1450 MHz.

Designed to meet Navy MIL-STD-167-1 vibration standard and MIL-STD-461 EMI & RFI standards (including 200V/M).

Typical Data for the Lite Media Exchange Point (LMXP)

Mounting	Standard 19 inc rack mount
Dimensions	43.18 cm x 25.4 cm x 4.44 cm (17" x 10" x 1.75")
Power	110/220VAC, 47-63 Hz, Single Phase
Weight	2.45 kg (5.4 lbs)
Ethernet	3 Ethernet Ports (2 Rear / 1 Front)
Connectors	1 F-type connector
Status indication	6 Tri-colored MXP status LED's
Display	2 Line Display
USB	USB Device (Mini B)
Ports	1 RS-232 pass through port
	1 NMEA RS-232 serial port
	1 (RJ45) RS-232 Console Port
	Aux IN1 & Aux IN2 • SW1, SW2 (I/O)
	1 Gigabit SFP Ethernet



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